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**Кінгслей Аджакпа**

Тернопіль національний технічний університет імені Івана Пулюя, Україна

## **СУДЕБНОХІМІЧЕСКИЙ ИНСТРУМЕНТ ДЛЯ ANDROID МІСЦЕ ЗБОРУ ТА АНАЛІЗУ ДАНИХ**

**Kingsley Ajakpa**

### **A FORENSIC TOOL FOR ANDROID LOCATION DATA COLLECTION AND ANALYSIS**

In the United States, 136.7 million people owned a smartphone (approximately fifty-eight percent of the mobile market).[1] The major platforms currently in the smartphone market are Google's Android with fifty-two percent of the market, Apple's iOS with thirty-nine percent, BlackBerry's BlackBerry OS with roughly five percent, and Microsoft's Windows Mobile OS with three percent. This translates to 71.1 million Android mobile devices, 53.3 million iOS devices, 7.1 million BlackBerry devices, and 4.1 million Windows Mobile devices. As smartphones rise in popularity, it becomes more important to be able to accurately analyze these devices for forensic evidence. Using location-based services has become increasingly popular in mobile applications.

Social media applications like Facebook, Twitter, and FourSquare use location data to let users tell their friends where they are and what they are doing. Fandango, Yelp, and Google Local are being used to find nearby attractions like restaurants, movie theaters, hair salons, and more. MapQuest, Google Navigation, and Google Maps help users navigate to a destination of their choice. All of these applications use the GPS device in Android smartphones and have a possibility of storing location data on the mobile device for future analysis by a forensics scientist. New applications for the Android platform are being released every day. Google has a minimal screening process before they put applications on the Google Play market meaning anyone can create and release an application on the Google Play marketplace.

According to AppBrain and Google, the Google Play market now has over 700,000 applications. Due to this large number of applications, it would take an extremely long amount of time to manually search all of these applications for location data. Not only are there a large number of applications currently on the market, the number of applications are growing every day. There can be anywhere from 15,000 to 37,500 new applications on the Android Market every month.[2] The mobile forensic community needs a toolset to keep track of where location data is being stored and to analyze new applications when they are released for new files containing location data – these are the problems this thesis hopes to address

### **References**

1. ComScore Reports March 2013 U.S. Smartphone Subscriber Market Share." ComScore, Inc. ComScore, Inc, n.d. Web. 06 May 2013.
2. <[http://www.comscore.com/Insights/Press\\_Releases/2013/5/comScore\\_Reports\\_March\\_2013\\_U.S.\\_Smartphone\\_Subscriber\\_Market\\_Share](http://www.comscore.com/Insights/Press_Releases/2013/5/comScore_Reports_March_2013_U.S._Smartphone_Subscriber_Market_Share)>.